

Appl. No. 10/671,626
Amendment dated June 8, 2006
Reply to OA of February 8, 2006

REMARKS

Applicants have carefully reviewed the Examiner's Office Action dated February 8, 2006, in which the Examiner rejected claims 2 and 4-9 under 35 U.S.C. 102(b) or under 35 U.S.C. 103(a). These rejections have been carefully considered but are most respectfully traversed in view of the amendments to the claims.

Amendments to the Claims

Claims 2, 4, 6, 7 and 9 have been amended without adding any new matter and in full compliance with the statutory requirements. The additions of the amended claims are fully supported by the original description in page 10, lines 4-7 as would be appreciated by one of ordinary skill in the art to which the invention pertains.

Claim Rejections under 35 U.S.C. 102(b)

The rejections of claims 2, 5 and 8 under 35 U.S.C. 102(b) as being anticipated by Kagami et al.(U.S. 4,275,333), and the rejection of claim 6 under 35 U.S.C. 102(b) as being anticipated by Kimura et al.(JP 01-182390) have been carefully considered but are most respectfully traversed in view of the amendments to the claims. In this regard, Applicants wish to direct the Examiner's attention to MPEP §2131 which states that to anticipate a claim, the reference must teach every element of the claim.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor*

Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

The present invention as defined in the amended claims 2 or 8 is directed to a fluorescent display device having a phosphor layer, the phosphor layer including a compound containing at least one of P, K and Na. In the conventional display device, there is a problem that a luminescence property thereof may become unstable when exposed to even a very small amount of moisture and/or residual gas remaining therein. Therefore, an object of the present invention is to improve the luminescence property, i.e., the luminance residual ratio and the high temperature exposure characteristic, by adding materials to a phosphor layer of the display device to remove even a very small amount of moisture and residual gas remaining therein. The inventors found that a compound containing P, K and/or Na can remove a residual gas remaining in the fluorescent display device at a high vacuum to thereby improve the luminescent property of the device. Further, the compound included in the phosphor layer exists separate from a phosphor but not contained in the phosphor (see the description from page 8, line 16 to page 9, line 22). It is clear that the compound is separated from the phosphor since a phosphor paste including the compound and the phosphor is calcined at the temperature of 450°C which cannot cause a chemical reaction therebetween (see the description of page 12 lines 3-13).

In contrast, Kagami discloses fluorescent compositions including a conductive material. However, $(\text{Sr}, \text{Ba})_3(\text{PO}_4)_2:\text{Eu}^{2+}$ disclosed in Kagami is a phosphor material itself but not an additional material separate from the phosphor. Further, $(\text{Sr}, \text{Ba})_3(\text{PO}_4)_2:\text{Eu}^{2+}$ cannot absorb a residual gas remaining in the fluorescent display device unlike the compound of the present invention. Accordingly, $(\text{Sr}, \text{Ba})_3(\text{PO}_4)_2:\text{Eu}^{2+}$ is absolutely different

from the compound of the present invention as would be appreciated by one of ordinary skill in the art to which the invention pertains.

It is also believed that claim 5 depending on claim 2 is allowable for the same reasons indicated with respect to the claim 2 and further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in the claim 2, remove the invention defined therein further from the disclosures made in the cited references.

Further, although Kimura discloses a phosphor composition including a compound containing P_2O_5 , the phosphor paste as defined in the amended claim 6 does not include a compound containing P_2O_5 but a compound selected from the group consisting of K_3PO_4 , $NaPO_3$ and Na_2SiO_3 . Accordingly, the rejection of claim 6 should also be withdrawn.

Claim Rejections under 35 U.S.C. 103(a)

Applicants wish to direct the Examiner's attention to basic requirement of a prima facie case of obviousness as set forth in the MPEP §2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the references teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations.

The rejections of claims 4, 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (U.S. 6,690,119) in view of Kagami, and the rejections of claims 2, 4, 5 and 7-9 under 35 U.S.C. 103(a) as being unpatentable over Kimura in

Appl. No. 10/671,626
Amendment dated June 8, 2006
Reply to OA of February 8, 2006

view of Kagami have been carefully considered but are most respectfully traversed in view of the amendments to the claims.

The Examiner stated that Hamada also discloses a phosphor including a compound selected from the group containing P_2O_5 . However, none of the references disclose the compound claimed in the amended claims, the compound being selected from the group consisting of K_3PO_4 , $NaPO_3$ and Na_2SiO_3 . Accordingly, all of the references fail to disclose or even suggest the fluorescent display device of the present invention.

Further, as defined in claim 8, if the first compound containing P, K and/or Na coexists with the second compound containing W, the ability of removing the residual gas is improved. Accordingly, the luminance property of the fluorescent display device becomes better (see the examples of the description).

It is also believed that claims 5 and 9 depending on claims 2 (or 4) and 8, respectively, are allowable for the same reasons indicated with respect to the independent claims and further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in the independent claims, remove the invention defined therein further from the disclosures made in the cited references.

Appl. No. 10/671,626
Amendment dated June 8, 2006
Reply to OA of February 8, 2006


CONCLUSION

Applicants believe that this is a full and complete response to the Office Action. For the reasons discussed above, applicants now respectfully submit that all of the pending claims are in complete condition for allowance. Accordingly, it is respectfully requested that the Examiner's rejections be withdrawn; and that claims 2 and 4-9 be allowed in their present form.

Should the Examiner require or consider it advisable that the specification, claims an/or drawings be further amended or corrected in formal respects, in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case be passed to issue.

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,
BACON & THOMAS, PLLC

By: 
Richard E. Fichter
Registration No. 26,382

625 Slaters Lane, 4th Fl.
Alexandria, Virginia 22314
Phone: (703) 683-0500
Facsimile: (703) 683-1080

REF:cmd

June 8, 2006